

## **SUBSURFACE BOAT DATA AS OF JUNE 13, 2010**

### **For Brooks McCall:**

- Based on fluorimetry data, the depth of the sub-sea plume has not changed in depth, maintaining a depth of 1100-1300m since 5/19/2010.
- Results from June 12 of the Brooks McCall cruise show a fluorescence signal from the subsurface plume that is measurable southwest of the wellhead.
- Higher levels of dissolved oxygen were observed at or near the water surface. Levels decrease to their lowest concentration at approximately 500m and then increase at lower depths.
- In general, dissolved oxygen levels have been increasing over time, from 2.76 mg/l at 449m at its lowest to a high of 7.8mg/l at 2m.
- Dissolved oxygen values corresponded well with fluorescence at the plume depth (~1175m). This was observed on 5/31/10. This may indicate microbial activity is degrading the dispersed plume and consuming the oxygen.
- Dissolved oxygen concentrations have not decreased to less than 2.0 mg/l.
- Water temperature decreases with depth.
- Salinity increases from a depth of 50-150m, and then slowly decreases with depth until it reaches a constant at 650m.

### **For Ocean Veritas:**

- CTD measurements started on 6/2/10.
- Fluorimetry data indicated that a subsurface plume exists approximately 1,150 meters below the surface, southwest of the wellhead.
- From 6/2/10 to 6/8/10, all DO measurements were above 3.0 mg/L.
- From 6/8/10 until recently lower levels of DO have been observed (2.6 – 2.8 mg/L) at depths between 300 and 400m below surface.
- The highest DO concentrations observed have been around 5.6 mg/L at a depth of 2m below the surface.
- Dissolved oxygen concentrations have not decreased to less than 2.0 mg/l.